## REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-13 are pending in this application. Claims 1, 3, 5, 7-10 and 12 are amended by the present amendment. Support for the amended claims can be found in the original specification, claims and drawings.[1] No new matter is presented.

In the Office Action, Claims 1-2, 5-7 and 10-13 were rejected under 35 U.S.C. § 102(e) as anticipated by Sheu et al. (IEEE ICC, pp. 611-618, "A Fast and Efficient Heuristic Algorithm for the Delay and Delay Variation Bound Multicast Tree Problem," 2001, herein Sheu); and Claims 3-4 and 8-9 were rejected under 35 U.S.C. § 103(a) as unpatentable over Sheu.

In response to the above-noted rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103 in view of Sheu, Applicants respectfully submit that amended independent Claims 1, 3, 5, 10 and 12 recite novel features clearly not taught or rendered obvious by the applied reference.

Independent Claim 1 is directed to a multicast communication path calculation method for obtaining multicast paths from a given source node to a plurality of destination nodes in a network including a plurality of nodes. The method, in part, comprises:

> obtaining minimum delay paths from the source node to each of the destination nodes using topology information and delay information of the network;
>
> ***selecting candidate nodes of a rendezvous point node only from nodes on one of the obtained minimum delay paths***;
>
> for each of the candidate nodes, calculating minimum delay paths from the candidate node to each of the destination nodes, and obtaining a difference between the maximum value and the minimum value among delays of the calculated minimum delay paths;
>
> selecting, as the rendezvous point node, the candidate node for which the difference is smallest among the differences for all of the candidate nodes...

[1] E.g., specification at Figs. 5-9 and corresponding description.

Independent Claims 3, 5, 10 and 12, while directed to alternative embodiments, are amended to recite similar features. Accordingly, the remarks and arguments presented below are applicable to each of independent Claims 1, 3, 5, 10 and 12.

As disclosed in an exemplary embodiment at Figs. 5-9 of the specification, minimum delay paths from a source node 20 to each of a plurality of destination nodes 1-5 are obtained using topology and delay information of the network. Then (as recited in Claim 2, for example), the minimum delay path having the maximum delay path is selected, and candidate nodes of a rendezvous point node are selected only from the nodes on the maximum delay path (e.g., ***only*** from nodes ***on one*** of the obtained minimum delay paths).

Turning to the applied reference, Sheu describes a Delay and Delay Variation Constraint Algorithm (DDVCA) that avoids the delay variations associated with "shortest path tree" method by establishing a central node in a network.[2]

Sheu, however, fails to teach or suggest "selecting candidate nodes of a rendezvous point node ***only*** from nodes ***on one*** of the obtained minimum delay paths," as recited in independent Claim 1.

In determining the central node, Sheu describes that DDVCA first calculates the minimum delay between each destination node and each other node in the network. Then for each node DDVCA computes the associated multicast variation between the node and each destination node. Then it selects the node with the minimum multicast delay variation as the central node.[3] Thus, Sheu describes that in order to determine which node is the central node, the minimum delay between each destination node and each other node in the network is calculated.

Claim 1, in contrast, recites "obtaining minimum delay paths from the source node to each of the destination nodes using topology information and delay information of the

[2] Sheu p. 613, col. 1, ll. 1-13.
[3] Id., p. 613, col. 1, ll. 14-25.

network" and "selecting candidate nodes of a rendezvous point node ***only from nodes on one*** of the obtained minimum delay paths." Then, the minimum delay paths are calculated from each of the candidate nodes to each of the destination nodes. Such a method of selecting candidate nodes ***only from nodes on one of the obtained minimum delay paths*** prevents the need to calculate a minimum delay between each destination node and each other node in the network, as described in Sheu.

Further, the Response to Arguments section of the Office Action also appears to assert that the minimum delay path algorithm is analogous to "selecting, as candidate nodes of a rendezvous point node, nodes on one of the obtained minimum delay path means." However, as described at p. 614, col. 1, ll. 1-13 of Sheu, the minimum delay path algorithm is merely used to establish a shortest route between a source node and a destination node, and has nothing to do with the selection of a candidate rendezvous node from one of these obtained minimum delay paths. The Response to Arguments portion of the Office Action also cites the general goals of Sheu's method at p. 613, col. 2, ll. 26-34 in apparently rebutting the previous presented arguments. However, this cited portion of Sheu is not related to selecting candidate nodes as rendezvous point nodes for a central node, whatsoever.

Therefore, Sheu fails to teach or suggest a method for obtaining multicast paths which includes obtaining minimum delay paths from the source node to each of the destination nodes, selecting candidate nodes of a rendezvous point node ***only from nodes on one of the obtained minimum delay paths*** and calculating minimum delay paths from the candidate node to each of the destination nodes to select a rendezvous point node, as recited in independent Claim 1. Instead, as noted above, Sheu does not select and analyze nodes on only one of the obtained minimum delay paths, but instead computes a multicast delay variation for every node in each of the paths between the source node and each of the destination nodes.

Accordingly, Applicant respectfully requests that the rejection of Claim 1 under 35 U.S.C. § 102 be withdrawn. For substantially similar reasons, it is also submitted that independent Claims 3, 5, 10 and 12 patentably define over Sheu and Applicant respectfully requests that the rejection of these claims under 35 U.S.C. § 102 and 35 U.S.C. § 103 be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1-13 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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